

IN THE CLAIMS:

Claims 1 - 39 have been cancelled. Claims 40 - 82 have been added.

Claims 1 - 39 (cancelled).

40. (new) An audio system comprising:

a serial bus cable;

an audio device, including

a serial bus interface (I/F) unit that is connectable to the serial bus cable so as to transmit and receive digital audio data via the serial bus cable, wherein the serial bus I/F unit separates audio data and control data from the received digital audio data,

a signal processor that is connected to the serial bus I/F unit and that performs prescribed digital signal processing,

a D/A converter that is connected to the signal processor so as to convert the digital audio data into analog audio signals,

an audio output section for outputting the analog audio signals from the D/A converter,

a loudspeaker for performing electro-acoustic conversion on the analog audio signals so as to provide an audio output,

a system control unit that controls the audio device based on the control data, which are isolated by the serial bus I/F unit and that is capable of transmitting the control data of the audio device to the serial bus cable via the serial bus I/F unit,

an operational switch that is a manually operable member controlled by a

user, and

a display that can display the content of operation and control of the audio device for the user; and

a personal computer, including

a CPU for executing operating software and application software,

a first I/F that is connectable to the serial bus cable so as to perform bi-directional transmission with the audio device via the serial bus cable,

a second I/F that is connectable to a communication line and that serves as a network interface for inputting and outputting data via the communication line,

a graphical user's interface (GUI) that has a data input section operated by the user,

a display for displaying data necessary to operate the audio device,

a control data processor that is connected to the first I/F and the graphical user's interface so as to control the personal computer based on the control data given from the first I/F and that produces control data based on the operation of the graphical user's interface and sends it to the serial bus cable via the first I/F,

an audio data storage that serves as a memory for storing the digital audio data, and

an audio data processor that selects prescribed digital audio data stored in the audio data storage based on the operation of the graphical user's interface so as to send it to the serial bus cable via the first I/F, wherein each of the audio device and the personal computer is capable of reproducing the digital audio

data independently,

the control data allowing the audio data to operate and the digital audio data reproduced in the audio device are produced based on the operation of the graphical user's interface, and

the control data and the digital audio data are sent to the audio device, and the control data produced by the audio device is sent to the personal computer so as to reflect the content of the control data on the graphical user's interface displayed in the display in such a way that the operation information of the audio data match the operation of the graphical user's interface.

41. (new) An audio system according to claim 40 further including an antenna and a tuner for receiving audio signals from an external device.

42. (new) An audio system according to claim 41, wherein the tuner receives AM signals.

43. (new) An audio system according to claim 41, wherein the tuner receives FM signals.

44. (new) An audio system according to claim 41 further including an A/D converter for performing analog-to-digital conversion on the received audio signals.

45. (new) An audio system according to claim 40 further including an analog external input terminal for receiving analog audio signals from the external device.

46. (new) An audio system according to claim 45, wherein the A/D converter performs analog-to-digital conversion on the received analog audio signals.

47. (new) An audio system according to claim 45 further including a tuner and a switch for selectively inputting the analog audio signals from the tuner or the analog audio signals from the analog external input terminal.

48. (new) An audio system according to claim 47 further including an A/D converter for performing analog-to-digital conversion on the analog audio signals, which are selected by the switch.

49. (new) An audio system according to claim 40 further including a digital external input terminal for receiving digital audio signals from an external device.

50. (new) An audio system according to claim 49 further including a digital interface receiver for separating control bits and audio data from digital data input thereto.

51. (new) An audio system according to claim 50, wherein the digital interface receiver (DIR) detects a reproduction clock frequency from the digital data so as to extract data in synchronization with the reproduction clock frequency, and wherein the DIR separates the control bits from the extracted data.

52. (new) An audio system according to claim 51, wherein the DIR verifies whether or not the digital data input thereto are reliable.

53. (new) An audio system according to claim 52, wherein the DIR performs verification based on a sampling frequency.

54. (new) An audio system according to claim 40 further including a plurality of digital input sources and a multiplexer that selectively outputs the digital input sources or that mixes the plurality of digital input sources.

55. (new) An audio system according to claim 40, wherein the signal processor executes graphic equalization.

56. (new) An audio system according to claim 40, wherein the signal processor executes sound field control.

57. (new) An audio system according to claim 40, wherein the audio output section includes a volume controller.

58. (new) An audio system according to claim 40 further including an optical disk unit.

59. (new) An audio system according to claim 58, wherein the optical disk unit is a CD player that can play back a music CD.

60. (new) An audio system according to claim 40 further including a mixing portion that mixes the digital data provided from the serial bus I/F unit with other digital data.

61. (new) An audio system according to claim 40 further including a mixing portion in which the digital data provided from the serial bus I/F unit are converted into analog signals, which are mixed with other analog signals.

62. (new) An audio system according to claim 40 further including an optical disk unit, wherein the memory is realized by an optical disk and an optical disk player.

63. (new) An audio system according to claim 62, wherein the optical disk is a music CD.

64. (new) An audio system according to claim 40, wherein the second I/F is connected to the Internet.

65. (new) An audio system according to claim 40, wherein the second I/F is connected to a LAN.

66. (new) An audio system according to claim 40, wherein the input section corresponds to a keyboard.

67. (new) An audio system according to claim 40, wherein the input section corresponds to a mouse.

68. (new) An audio system according to claim 40 further including an operation panel showing a power switch for turning on and off power supplied to the audio device.

69. (new) An audio system according to claim 40 further including an operation panel showing a plurality of switches for selecting audio sources.

70. (new) An audio system according to claim 40 further including an operation panel showing a mute adjuster for adjusting a mute level.

71. (new) An audio system according to claim 40 further including an operation panel showing a mixing adjuster for adjusting a mixing level adapted between the personal computer and other audio source.

72. (new) An audio system according to claim 40 further including a loudspeaker for performing electro-acoustic conversion on audio signals produced by the personal computer.

73. (new) An audio system according to claim 72, wherein the loudspeaker is formed by a pair of speakers for performing stereo playback.

74. (new) An audio system according to claim 73 further including an operation panel showing a balance adjuster for adjusting an output balance with respect to the pair of speakers.

75. (new) An audio system according to claim 40, wherein the serial bus cable is based on a USB standard.

76. (new) An audio system according to claim 75, wherein transmission control is performed in units of 1 millisecond frames.

77. (new) An audio system according to claim 75, wherein the audio data and the control data are separated from each other based on a start-of-frame (SOF), which is detected from a basic frame.

78. (new) An audio system according to claim 40, wherein the serial bus cable is based on an IEEE1394 standard.

79. (new) An audio system according to claim 78, wherein the audio data and the control data are separated from each other upon reception of a self-ID packet.

80. (new) An audio system according to claim 40 further including plural types of serial bus cables, wherein the audio data and the control data are transmitted using different cables.

81. (new) An audio system according to claim 80, wherein the control data is transmitted via a RS232C cable.

82. (new) An audio system according to claim 80, wherein the audio data is transmitted via a SPDIF cable.